

Annexe 1

Abbr.	Title of experiment	Phase 1&2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10	Phase 11	Phase 12	Phase 13	Phase 14	Phase 15	Phase 16	Phase 17	Phase 18	Phase 19	Phase 20	Phase 21	Phase 22	
		96/97	97/98	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	
AS	Anisotropy of stresses											C	C	C	C								
BB	Borehole behaviour deformation													B	B	B							
BF	Borehole fluid effects	AN	A	A																			
BI	Borehole inventory						F	F	F														
BN	Bitumen-Nitrate-Clay-Interaction											ACNS	ACNS	ACINS	AINS	AINS	AINS	AINS	AINS	AIS	AFIS	AFIS	
BS	Variability of brittleness of Opalinus Clay																						T
BW	Short-term borehole wall developm.													BN	BN								
CD	Cyclic deformations											HNT	HNT	HINT	HINT	HINT	HIT	BHIT					
CI	CI Cement clay interaction									N	N	N	AN	AIN	AIN	ACINS	ACINOS	ACINOS	ACINOS	ACNOS	ACFNOS	ACFNOS	
CP	Chem. and physical weathering							C	C	C													
CW	High-pH cement porewater	AENO	AENO	ANO	ANO	NO																	
CQ	Carbonate Cap Rocks Quality																						T
CS	CO2-sealing integrity																OTV	OT	OT	OT	OT	OT	
CS-A	Well leakage simulation & remediation																	V	V	TV	TV	TV	
CS-B	Caprock integrity, remediation																			TV	TV		
CS-C	CO2-assessment shale properties																					FT	FT
DB	Deep inclined borehole through OPA																	BGINTW	BGINTW	BGINTW	BGINTW	BGINTW	
DB-A	Porewater characterisation																		INTW	NTW	INTW		
DBS	Deep borehole simulation			N																			
DF	Drilling fluids for Opalinus Clay																					N	N
DI	Diffusion in rock		AEINJS	AEINJS	AEINJS	AEINJS																	
DI-A	Long term diffusion				IN	EIJN	EIJN	AEIN	AEIN	AEN	AN	AN	AN										
DI-B	Long-term diffusion						EN	EN	EN	EN	E												
DM	Deformation mechanisms		AENO	ANO																			
DM-A	Long-term deformation measurement I																G	G	G	G	G	G	BG
DM-B	Long-term deformation measurement II																G	G					
DR	Diffusion and retention								AGIN	AGIN	AIN	AIN	AIN	AIN	AIN	AIN	AIN						
DR-A	Disturbances, diffusion and retention												N	NW	NW	NW	DNW	DNW	DNW	NW	NW		
DR-B	Long-term diffusion														N	NW	DW	NW	NW	FNW	FNW		
DS	Determination of stress											N	N	BCNW	BCNVW	BNVW	NV	NVW					
DT	Drilling techniques	AN																					
EB*	Engineered barriers					BEN	BEN	BEN	BEN	BEN	ABEN	ABEN	ABEN	ABEN	ABEN	ABEN	ABEN	ABEN					
ED-A	EDZ hydraulic and pneumatic testing	ABENO	AN																				
ED-B	EDZ evolution around Ga 98	AN	AEN	AEN	AEN	EN																	
ED-C	EDZ seismic characterisation	ABNO	B	ABEN	BN	B	B	B															
EH	EDZ self-healing		ANS	ANS	ANS	NS	ANS																
ER	Natural electromagnetic radiation													C									
EG	EDZ gas diffusion by carbon isotopes													C	C	C	C	C	C	C	C	C	C
EZ-A	EDZ cut-off								ABN	ABN	ABN												
EZ-B	Fracture generation								H	BH	BH	H	BH										
EZ-E	Analysis of swollen EDZ								HN														
EZ-G*	Geophysical characterisation of EDZ									A	A	A	A	A									
FE	Full scale emplacement demonstration														N	AN							
FE-A	Site preparation for FE															AN							
FE-B	THM part of FE																ANV	ABDGN	ABDGN	ABDGN			
FE-C	Engineering part of FE																N	N	N	N			
FE-D*	Emplacement part of FE (LUCOEX)																		N	N			
FE-E	EDZ in vicinity of FE Gallery																			B N W	BNTW		

* Experiments co-financed by EC

Partners

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| A ANDRA | B BGR | D U.S. DOE | C CRIEPI | E ENRESA | F FANC (FOWG*) | G GRS | H ENSI (HSK) |
| I IRSN | J JAEA | N NAGRA | W NWMO | O Obayashi | S SCK-CEN | T swisstopo | V Chevron |

New experiment from Phase 22 on

*FOWG until Phase 10. FANC from Phase 21 on

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FE-G	Gas monitoring in FE																						
FE-M	Long-term monitoring of FE																					ADNW	ANW
FI	Fluid-mineral interactions in OPA during natural faulting and heating tests																				DN	ABDFGNW	ABDFGNW
FM-A	Flow mechanism (fluid logging)	ANJS																					
FM-B	Flow mechanism (resin injection)	AEJN																					
FM-C	Flow mechanism (tracer)	AEJNS	AEJNS	AEJNS	AEJNS	AEJS	AES	AES															
FM-D	Evaporation logging		AJ	AJ	J	J	F	F	F	F		T	T	HT	HT	HT	HT	HT	HT	HT	HT	HT	HAT
FR	FracReact - Reactive Transport in Fractures																						B
FS	In-situ fault slip																		HT	HTJ	DJHT	BDJHT	
FS-A	Friction properties of Opalinus Clay																						NT
FP	Fracture propagation		AE	AE	AE																		
GC	Geomechanical in situ Characterization of Opalinus Clay																						BN
GD	Analysis of geochemical data											AENS	AENS	AENS	ANS	ANS	ANS	ANS	AENS	AENS	AEFNS	AEFNS	
GM	Geochemical modelling			AEIN	ABEIN	ABEIN																	
GM-A*	Geophysical monitoring											N	N	N	N	N	N	N					
GP	Hydraulic and gas permeability	ANS	ANS	ANS	AS																		
GP-A	Hydraulic and gas permeability				N																		
GP-B	Gas and water coupled processes						BN	BN															
GR	Ground penetration radar			A																			
GS	Gasfrac self-sealing		N	N	N	N																	
HA	Hydrogeologic analyses				ABINO	BINO	BINO	BINO	BINO	BINO	BINO	BINO	BNO	BNO	BNO	BNO	BNO	BN	BN	BN	BN		
HA-A	Hydraulic & geoph. param. variability																					BFN	BFN
HE	Heater experiment		AE	AE	AE	AE																	
HE-B*	Heater experiment						BEGN	BEGN	BEGN	BEGN													
HE-C	Heater experiment						A	A															
HE-D	THM behaviour of host rock (heater test)								AG	AG	AG	A											
HE-E*	In-situ heater test (PEBS)															BEGN	BEGN	BEGN	BEGN	BEGN	BEGN	BEGN	BEGNO
HE-F	Gases and watersoluble																						BF
HE-S	Heater shaft maintainance									N													
HG-A	Gas path through host rock+along seals								BN	ABN	ABN	ABN	ABN	ABNW	ABNW	ABNW	ABNW	ABNW	ABNW	ABNW	ABNW		
HG-B	In situ gas permeability								AB	AB	AB	AB	AB	AB	AB	B							
HG-C	Long-term gas migration											GN	GN	GN									
HG-D	Reactive gas transport in OPA														AN	AN	AN	AN	AN	AN			
HM	Lab tests on HM coupled behaviour																	HT	H	H	H	H	H
HM-A	3D coupled HM model																				HT	HT	
HM-B	Mechanical suction in borecores																					BHT	BHT
HM-C	Implementation an validation																						H
HS	Aquifer survey around OPA																					T	T
HT	Hydrogen transfer													ABN	ABN	AN	ANW	ANW	ANW	ANW	AW	AFW	AFW
IC	Iron corrosion in clay											AJN	AJNW	AJNW	AJNW	AJNW	AJNW	AJNW	AJNW	AJNW	AJNW	AJNW	AJNW
IC-A	Iron corrosion of bentonite																NW	ANW	ANW	ANW	ANW	ANW	ABFINTVW
IS-A	In-situ stress (over/undercoring)	AN																					
IS-B	In-situ stress (borehole slotter)	AN																					
IS-C	In-situ stress (hydraulic fracturing)		A	A																			
IS-D	In-situ stress (overcoring)				B	B	B	B	B	AB													
LP	Long-term monitoring pore pressures											ANT	ANT	AINTW	AINTW	AITW	AINTW	AINTVW	AINTVW				
LP-A	Long-term monit. parameters																				ABINTVW	ABFINTVW	BGN
LT	Laboratory (temperature) testing					BN	BN	B	B	B	B	BN	BN	BN									
LT-A	Properties analyses labtesting														BNV	BNV	BNV	BNV	BGN	BGN	BGN	ABFNW	
MA	Microbial activity								ABCIN	ABCIN	ABN	ABN	ABN	ABNW	ABNW	ABNW	ABNW	ABNW	ABNW	ABNW	ABNW	ABFNW	ABFNW
MA-A	Platform microbial studies																				N	NT	NT

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MB	Mine-by test Gallery 08												ABGNO	ABGNOW	ABGNOW	ABGNOW						
MD	Cosmic myon density tomography														CT	CT	T	T	T	T	T	T
MF	Mont Terri modelling task force										N	HN										
MH	Long-term monitoring heaves													NT	NT	NT	NT	NT	NT	T	T	T
MO	Monitoring																AHT	AHT	AHT	AHT	AHT	AHT
MO-A	Monitoring with passive geophysics																ANTV	NT	AT	AT	AT	AT
MR	Feasibility study of tunnel MRS																					B
NT	Natural tracer profile								N		N											
OP	Osmotic pressure	ANS	AINS	AINS	AINS	INS	INS	INS														
OP-A	Osmotic pore pressure measurements														NV	NV	NV	NV	NV			
PC	Porewater chemistry						ABENS	ABCJNS	ABCJNS	ABCJNS	ABCJNS	ABCJNS	ABCJNS	ABCJNS								
PC-A	Porewater chemistry						A															
PC-B	Porewater dating						CN	CN	C													
PC-C	Gas and porew. equilibration							ABNS	ABNS	ABNS	ABNS	ABNS	ABNS	ABNS	ABNS	ABNS	ANS	ANS				
PP	Porewater pressure	A	A																			
PS	Petrofabric and strain determination													T	TV	TV	TV	TV	TV	T	NT	T
RA	Rock mechanical analyses				ABINO	BINO	ABINO	ABINO	BHNO	BNO	BNO	ABNO	ABNO	ABNO	ABHNO	ABHNO	ABN	BN	BN	BN	BN	BN
RB	Horizontal raise boring			AE	AE	AE																
RC	Rock mass characterisation													BHT	BHTV	BHTV	BH	BH				
SB*	Selfsealing barriers clay-sand mixtures							BCEGNO	BGNO	BGN	BG	G	G	GN	G	G	G					
SB-A	Borehole sealing experiment																		BGN	BGN	BG	BG
SE*	Selfrac MT						N	N	N	N												
SE-H*	Selfsealing with heat (Timodaz)										N	N	N	N	N							
SE-P	Self-sealing processes in old EDZs																					BHT
SF	Self-sealing of tectonic faults									N	N	N		N								
SM-B	High resolution seismic monitoring																	NT	T	T	T	T
SM-C	Nanoseismic monitoring																				T	T
SO	Sedimentology of Opalinus Clay																BT	BT	BT	BT	BT	BT
SO-A	Palynologie of Opalinus Clay																			NT		
SO-B	Analyses of periodic patterns in OPA																				T	T
SR	Low-pH shotcrete for rock support													N	N	N						
ST	Seismic transmission measurem.																			B	B	B
SW-A	Planning and technical preparatory work																					BEGNT
SW-B	Scoping calculations																					BGH
TH-A	Microscale THMC							NO	NO	NO	NO											
TR	Look-ahead imaging with time reversal																NV					
TT	Twin hole disposal configuration test														CG							
UZ	Unsaturated zone	AN		N	N																	
VA	Spatial variability of Opalinus Clay																BN	N	BN	BN		
VE*	Ventilation test						EGIN	EGIN	EGIN	EGIN	BEGIN	BEGIN	BEGIN									
WS-A	Groundwater sampling (in-situ)	AENJS	AEINJS	AN	AN																	
WS-B	Porewater sampling (laboratory)	ANJS	AEINJS	AN																		
WS-C	Porewater chemistry		AEN	AEN																		
WS-D	Trace elements		AEIN	AEN																		
WS-E	Pore water profile through Opalinus Clay		AEIN	AIN																		
WS-F	BRGM analyses			A																		
WS-G	Porewater lab comparison FORPRO			A																		
WS-H	Investigation of wet spots I													N	BGNT	N						
WS-I	Investigation of wet spots II																	BN	BN	BN	BN	BN
3M	3D-Model Mont Terri anticline												T	T								

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